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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
GEORG MICHELITSCH, ET AL.	: EXAMINER: THERIAULT, STEVEN B.
SERIAL NO: 10/726,298	:
FILED: DECEMBER 1, 2003	: GROUP ART UNIT: 2179
FOR: METHOD FOR OPERATING A DISPLAY DEVICE	:

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is a reply to the Examiner's Answer (herein, the EA) dated October 5, 2010.

This Reply Brief addresses specific assertions made in the EA.

A. "***... deriving a view angle of the user with respect to the display from said image of the user ...***"

As discussed in the Appeal Brief filed July 12, 2010 (herein, the AB), independent Claim 15, for example, recites, in part, a method for operating a display device, comprising:

> ***capturing an image of a user ...***
> ***deriving a view angle of the user with respect to the display from said*** [captured] ***image of the user***;
> ***changing a display mode for displaying display information on said display ... to compensate for the view angle of the user ...***

Independent Claims 19 and 20 recite similar features.

Regarding the features directed to capturing an image of the user and deriving a view angle of the user with respect to the display from said image, pp. 19-21 of the EA argues that the claim does not require the image to first be captured and then for the view angle to be

derived based on this captured image, instead arguing that the claim could be construed such that "The 'deriving limitation' states deriving from said image, which appears to occur during the capturing process because the specification provides evidence that the detection is done on the video." The EA then continues by stating "... it appears the steps are done together on the same image, and not an image captured and then analyzed ..."

Claim 15, however, recites "***capturing an image of a user***" and "deriving a view angle of the user with respect to the display from ***said image of the user***." Therefore, Claim 15 clearly recites capturing the image of the user, and then relies on antecedent basis by reciting that the view angle of the user is derived from ***said*** image of the user. Thus, the image must first be captured before the view angle of the user is derived from the image.

Regardless of the interpretation of this limitation, none of Lee, Fedorovskaya and Stern, even if combined, teach or suggest "***deriving a view angle of the user with respect to the display from said*** [captured] ***image of the user***," as recited in independent Claim 15.

In maintaining the rejection of this claimed feature, the bottom of p. 22 and the middle of p. 23 of the EA rely on paragraph [0055] of Fedorovskaya, asserting that this reference "teaches the use of a camera to determine the distance of the user from the camera and the head of the user." This statement, however, is a mischaracterization of this cited passage of Fedorovskaya. Instead, paragraph [0055] of Fedorovskaya describes a process of determining a smile size of a user by determining a maximum distance between a user's mouth corners divided by a distance between a user's eyes. Thus, Fedorovskaya does appear to describe acquiring an image of the user, but then merely determines a distance between facial features of the user to determine a smile size of the user.

Further, p. 22 of the EA maintains the view taken in the FR that "the suggestion in Fedorovskaya suggested that distance can be determined by facial recognition algorithms" and "the extracted measure of persons head depends on the distance of the user from the

video camera and other measures". In Fedorovskaya, however, the absolute value of the distance between the user and the display is irrelevant. Fedorovskaya teaches nothing more than forming the ratio between the "smile size" and some measures related to the head of the person, see paragraph [0055], third sentence, in order to *avoid* a distance measurement. And since the distance between the display and the user is irrelevant for Fedorovskaya and not measured, the skilled practitioner would not be motivated to consult the Fedorovskaya document for determining a distance

At no point, therefore, does Fedorovskaya even describe determining a distance from the display to the user, whatsoever, much less "***deriving a view angle of the user with respect to the display from said*** [captured] ***image of the user***," as recited in independent Claim 15.

In an apparent acknowledgment of these deficiencies, pp. 24-25 of the EA then relies on paragraphs [0029-0031] and paragraphs [0043-0044] of Stern, apparently asserting that these cited passages describe deriving a view angle of a user with respect to the display ***from said image of the user***.

Paragraphs [0029-0031] of Stern describe a process of testing or determining a user's visual acuity by determining the visual acuity of a user at the user's working distance from a computer monitor. This process includes using pattern analysis on captured images of a user's face and testing the user using a vision test. The EA asserts that this cited portion of Stern "suggests use of real time measurement of viewing distance while vision testing, adjusting a pattern size image relative to viewing distance."

Contrary to the assertion set forth in the EA, however, at no point does paragraphs [0029-0031] of Stern describe performing a real time measurement of viewing distance based on a captured image of the user. Otherwise stated, while this cited portion of Stern does appear to describe capturing an image of the user, Stern fails to teach or suggest "***deriving a***

view angle of the user with respect to the display from said image of the user," as recited in independent Claim 15.

Therefore, paragraphs [0029-0031] of Stern describe that the captured image of the user is used to determine the visual acuity of a user, while paragraphs [0043-0044] describe the use of a light emitting diode (LED) "in order to determine the correct viewing angle of the individual." By definition, however, an LED emits light and does not capture an image of a user.

The EA, at the top of p. 25, appears to concede that Stern describes using the LED to determine a user's view angle by stating that "Stern clearly teaches the use of the camera and the image sensor and the LED to determine distance, angle and viewing size of the image, and not just the LED." Thus, the EA concedes that Stern's system includes the LED sensor, and, if any component in Stern is used to correct for a view angle, it is clearly the LED. As discussed above, an LED does not capture an image of the user, and does not use a captured image to derive a view angle of the user with respect to the display.

Stern, therefore, fails to teach or suggest that an image captured by the camera or image sensor is used to "***derive[e] a view angle of the user with respect to the display from said image of the user***," as recited in independent Claim 15.

Therefore, Lee, Fedorovskaya and Stern, even if combined, teach or suggest "***deriving a view angle of the user with respect to the display from said image of the user***," as recited in independent Claim 15.

B. **" ... changing a display *mode for displaying display information on said display* ... to compensate for the view angle of the user,** wherein in said display mode ***an amount of said displayed display information*** depends on said user position information ..."

In maintaining the rejection of this feature, p. 29 of the EA asserts that "Stern appears to teach a system in Figure 1 that not only includes a distance sensor, but also a camera and

image sensor and may include an LED for leveling and a mechanical device for adjusting the monitor angle during the day by monitoring the user's position."

Therefore, the EA appears to take the position that the mechanical adjustment described in Stern reads on the claimed features directed to " ... changing a display ***mode for displaying display information on said display*** ... to compensate for the view angle of the user ...," as recited in independent Claim 15.

As noted at p. 27 of the EA, Figs. 2A-2B; p. 6, ll. 15-38 and p. 8, l. 26 – p. 9, l. 17 of the present specification disclose that changing the display mode is defined as changing a mode (i.e., color, size, amount, etc.) by which content is actually presented on the display screen. At no point does the specification describe that this change in mode relates to a mechanical change of display position, and since the claim specifies "changing a display ***mode for displaying display information on said display***" it would not be reasonable to interpret this claim outside of the meaning of the plain language of the claim.

With this definition in mind, paragraph [0044] of Stern describes a mechanical apparatus that controls the height of the monitor and the viewing angle of the monitor. Therefore, the features of Claim 15 differ from Stern in that the display mode (clearly referring to the contents of what is displayed) is changed, whereas Stern changes the monitor's physical position.

Therefore, even if Stern, Fedorovskaya and Lee were combined, the combination of these references fail to disclose "changing a display mode ***for displaying display information on said display ... to compensate for the view angle of the user***", as recited in independent Claim 15.

Moreover, p. 29, the EA maintains the view that "the prior art of Stern suggests to the skilled artisan that the camera image sensor, LED and mechanical apparatus of Stern can be

used to modify Lee to adjust the angle of the image for the purposes of tracking a users real time Vision of a computer screen ..."

Lee, however, refers to situations in which the distance between the display and the user significantly varies, see Figs. 5-6 and paragraph [0007], where the difference between the display and the user is such that it is inconvenient for the user to manually adjust the resolution of the display apparatus to the viewing distance. In contrast, Stern refers to the situation where the user sits before the display and only small variations of the distance between the user and the display are handled to reduce eyestrain. To that purpose, Stern provides a mechanical apparatus that moves the computer monitor in a forward or backward direction and/or controls the height of the monitor and the viewing angle of the monitor, see paragraph [0044].

Instead of "changing the display mode and the amount of displayed display information", Stern describes a mechanical approach. Therefore Stern teaches away from "changing a display mode for displaying display information, wherein in said display mode an amount of said displayed information depends on said user position information."

Even if combined with Lee, Stern would result in nothing more than an accumulation of Lee's and Stern's features: On one hand, the features of Lee for "far" distances between user and display, where the user glances at the display at significantly different distances (walking-around) and the size of the displayed image is adapted accordingly. On the other hand, the features of Stern for "short" distances, where the user is sitting before the display and where comparably small distance and position changes are compensated for by mechanical means.

Fedorovskaya refers to a method for collecting and associating affective information for at least one presented image to be classified. The degree to which a user likes a presented image is obtained by evaluating a "smile size" for the presented image, wherein the "smile

size" is the maximum distance between mouth corners after the image has been presented to the user. The "smile size" is related to the distance between the person's eyes to compensate for different viewing distances.

Fedorovskaya does not refer to measuring a viewing angle or to adapting the display mode, and therefore cannot be relied upon for the feature of "changing a display mode ***for displaying display information on said display*** ... ***to compensate for the view angle of the user,*** wherein in said display mode ***an amount of said displayed display information*** depends on said user position information" to the combined teaching of Stern and Lee.

Therefore, even if Stern, Fedorovskaya and Lee were combined, the combination of these references fail to disclose "changing a display ***mode for displaying display information on said display*** ... to compensate for the view angle of the user, wherein in said display mode ***an amount of said displayed display information*** depends on said user position information", as recited in independent Claim 15.

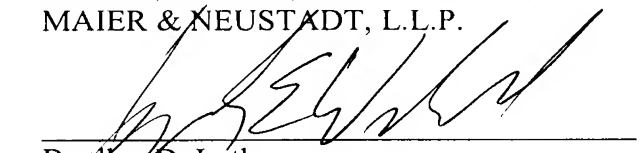
C. Conclusion

Consequently, independent Claims 15, 19 and 20 the corresponding dependent claims, are believed to define over Stern, Fedorovskaya and Lee for at least the reasons discussed herein and in the AB.

It is respectfully requested that the outstanding rejection be REVERSED.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



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